

## **COMPUTER-AIDED NUCLEIC ACID SEQUENCING**

### **ABSTRACT OF THE DISCLOSURE**

5 A computer system for sequencing nucleic acids is provided. The computer  
system may be used for de novo sequencing of a nucleic acid sequence by analyzing  
the fluorescence intensities of hybridized nucleic acid probes on biological chips. The  
probes with the highest intensities are utilized to sequence the nucleic acid and related  
probes are analyzed to increase the accuracy of nucleic acid sequencing. The  
sequence of the nucleic acid sequence may be determined from hybridization  
10 intensities that do not allow identification of perfectly complementary probes.